# Carpenter Ants

taken from a power point presentation by Will Lanier, MSU Extension Insect Diagnostics
(http://scarab.msu.montana.edu/pco/structipm&pest.htm)

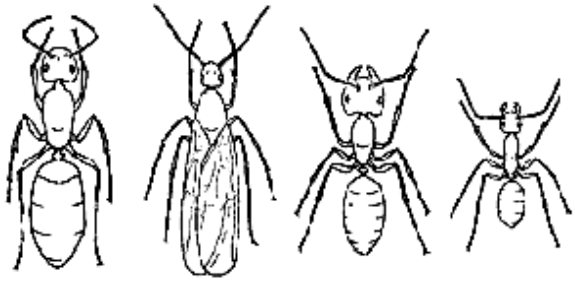
**Identification**

Although Carpenter ants are among the largest ants in Montana, size is not a good identification character.

- Workers, usually black, or red and black in color, range in size from 3/8 to ½ inch.
- Winged queen ants may be up to 1 inch in size.
- Ants are divided into different castes, ie. major and minor workers, males and queens.

Carpenter ant castes, from left to right: queen, winged male, major worker, minor worker.

- within one species, the size of the workers can vary considerably



The best way to separate carpenter ants from other ants is by the following:

- a waist with one node (petiole)
- a thorax with an evenly rounded upper surface

There are other ants that appear similar and area occasionally mistaken for carpenter ants.

- one or two nodes
- uneven profile of their thorax

In Montana, other ants are not wood-infesting.

**Ant or Termite?**

Carpenter Ants

- dark colored, narrow waits, elbowed antenna and different sized wings

Termites

- light-colored, thick waits, straight antennae and, if present, wings of equal length

Carpenter ants are commonly seen in the open.
Termites avoid light and are rarely seen.

**What They Eat?**

Carpenter ants DO NOT eat wood; they chew wood to create galleries and tunnels.
Carpenter ants feed on insects, both living and dead.
They also feed upon:

- meats or sweets, including syrup, honey, sugar, jelly, grease, and fat
- honeydew, a sweet liquid produced by aphids and scale insects, is particularly attractive

**When They Eat?**

Most foraging is done at night between 8:00 pm and 4:00 am during spring and summer months.

- sometimes workers travel up to 100 yards from a nest in search of food

**Where They Live?**

Carpenter ants nest in moist wood including places such as rotting trees, tree roots or tree stumps, and logs or boards lying on or buried in the ground

They may also nest in moist or decayed wood inside of buildings.

Infestations may be caused by wood exposed to leaks, condensation, or poor air circulation

- behind bathroom tiles
- around tubs, sinks, showers, and dishwashers
- under roofing, in attic beams and under floors
- in hollow doors and wall voids

Carpenter ants may also nest in foam insulation.

A parent carpenter ant colony sometimes establishes one or more satellite nests in nearby indoor or outdoor sites.

- satellite nests are composed of workers, pupae, and mature larvae

- a satellite nest does not require moisture

Satellite nests can be potentially more damaging because of the ants' ability to nest in sound wood.

**Damage**

Carpenter ants damage wood by excavating and creating galleries and tunnels.

- these areas are clean, i.e. they do not contain sawdust or frass, and are smooth, with a sandpaper-like appearance
- the damage to wood structures is variable

In most cases carpenter ant damage is slight because they nest in wood previously and primarily damaged by moisture.

However, if timbers are weakened, carpenter ant damage can be severe. As a colony grows and moist wood is unavailable, the ants may expand the nest into dry, sound wood. If sound wood is involved, structural damage can occur more quickly, possibly as soon as several months.

**Carpenter Ants During Spring**

It is common to find carpenter ants in homes during spring.

It is important to try to determine whether the ants are coming from an outdoor or an indoor nest.

Their presence is not sufficient evidence to conclude there is an infestation.

It can be difficult to determine where the invaders are coming from.

You may be able to make a more accurate determination based on when you first see carpenter ants.

- For example, if you find carpenter ants in your home within several days of the first warm, sunny weather in March or April, that suggests the ants are coming from a nest in or very near the building.

If your first sighting of carpenter ants does not occur until weeks or months after the onset of spring weather, those carpenter ants may be coming from an outdoor nest and are only foraging for food. however.

- it is also possible that they could be from satellite nest establishing indoor colony

Carpenter ants produce large numbers of queens and males during late summer.

They emerge from nests the following year in spring for their nuptial flights.

When carpenter ant nests are indoors, mating swarms become trapped inside.

- remember once they land, the queens wings break off and they then resemble workers

Finding **large** numbers of winged ants indoors is a sure sign that an indoor nest exists and may give the approximate location of the colony.

Finding **one to several** winged or wingless queens does not automatically mean a nest is present indoors.

- it is more likely the queens have just mated and have entered the home, searching for nesting sites
- they are not an indication of an indoor nest

= Casual Invaders

**Carpenter Ants During the Summer**
If your first sighting of carpenter ants does not occur until weeks or months after the onset of spring weather, those carpenter ants may be coming from an outdoor nest and are only foraging for food.

**Carpenter Ants During Winter**
In almost all cases, carpenter ants seen indoors during winter are an indication that there is an inside nest.

- one exception is when ants are brought indoors in firewood
- workers from firewood are not able to start nests in homes, nor do they damage wood structures in buildings

Carpenter ants nesting in homes may become active in winter if the nest receives sufficient warmth from sunlight, mild outdoor temperatures, or from indoor heat.

It is also possible for a carpenter ant nest to exist in a house during winter but not be noticed.

- if the nest exists at a north-facing outside wall, the ants will remain dormant until spring

When ants are active during winter they will forage at night, searching for moisture.

- it is common for a home dweller to enter a room early in the morning, turn on the lights, and see ants scurrying for cover
- common places to sight them are sinks, dishwashers, rolled-up towels, bathroom tubs, or other places where moisture is abundant

**Prevention**
The best way to prevent carpenter ant problems inside is to eliminate high moisture conditions that are attractive to them.

- replace any moisture-damaged wood
- be careful that wood or lumber that is stored in a garage of near the house is kept dry
- store firewood as far away from buildings as possible

1. Trim branches that overhang the home
2. Note: Be sure the tree or shrub species can be pruned at the time you wish; e.g., do not prune oak between April 15 and September 15 because of the risk of oak wilt.
3. Also, prune branches that touch electrical lines or other wires that are connected to the house; carpenter ants can travel from branches to lines and use them like highways to buildings.

**Detection**
The nest may be located by observations of worker ants, especially between 8:00 pm and 4:00 am. You can follow workers to their nest by setting out food that is attractive to carpenter ants.

- place food in areas where you find workers
- baiting carpenter ants is most effective when food is set outdoors during spring and summer

Many foods are attractive to carpenter ants.

- in fall, try honey or another type of sweet food
- in spring, carpenter ants are attracted to protein sources, such as live insects
- if you cut an insect into pieces, it takes less patience to follow the ants, they move faster

*Many pet shops sell crickets if you have trouble locating a suitable insect.

- Pay attention to areas where steady moisture is or has been a problem.
- Firewood stored in an attached garage, next to the foundation, along an outside wall, or in a basement.
- Basement areas, around the plumbing or vent entrances.
- Trees with branches overhanging the house.

Sound detection may be helpful in locating a nest. An active colony may make a dry, rustling sound that becomes louder if the colony is disturbed. This sound, thought to be a form of communication, is made with the mandibles (jaws) and is not related to wood chewing.

When trying to detect carpenter ants, tap the suspected area and then press an ear to the surface in order to hear any sound.

More than one nest may be present in a house. If one nest is found, watch for evidence of additional nests.

**Control: Indoors**

Every effort should be made to:

- locate and destroy the nest
- replace damaged or decayed wood
- eliminate any moisture problems

When treating a hidden nest use one of the following insecticidal dusts:

- bendiocarb (e.g. Ficam)
- chorpyrifos (e.g. Dursban)
- boric acid (e.g. Roach Prufe)

When the nest is behind a wall or in a hollow door, drill small holes, about 1/8 inch diameter, and apply an insecticidal dust labeled for use indoors.

If you cannot find the nest's exact location, you can dust into wall voids through electrical outlets.

Carpenter ants commonly travel along electrical wiring and are likely to encounter insecticides.

- this method works more slowly than a direct treatment into the nest

CAUTION: Use extreme care around electrical wiring and take all necessary steps to avoid accidental electric shocks.

Sprays along baseboards or in holes or cracks in the walls and floors, may reduce the frequency and number of ants you see.

However, they are not effective for nest control because:

- the ants carry very little insecticide back to their nests
- most ants forage outside and do not come in contact with the insecticides

Baits, such as Terro, are not effective against carpenter ants.

- carpenter ants have a wide range of feeding habits and baits currently on the market are not consistently attractive

Be aware of the potential for more than one nest in a building, but only treat nests that you know exist.

Do not treat areas of a building where additional nests are not found.

If a carpenter ant treatment is done correctly, it is not necessary to make additional applications.

**Control: Outdoors**

Often carpenter ant nests found indoors are satellite nests that can be traced back to a parent colony outdoors in trees, stumps, fence posts and other wood structures.

When possible, remove wood that contains carpenter ant nests, or destroy the colony.

When this is not practical, and there is evidence of carpenter ants entering your home, spray either chlorpyrifos or diazinon around the building's exterior. These insecticides are purchased as liquid ready-to-use or liquid concentrates.